USDA FOREST SERVICE
RESOURCE BULLETIN NC-18
1973

PULPWOOD PRODUCTION

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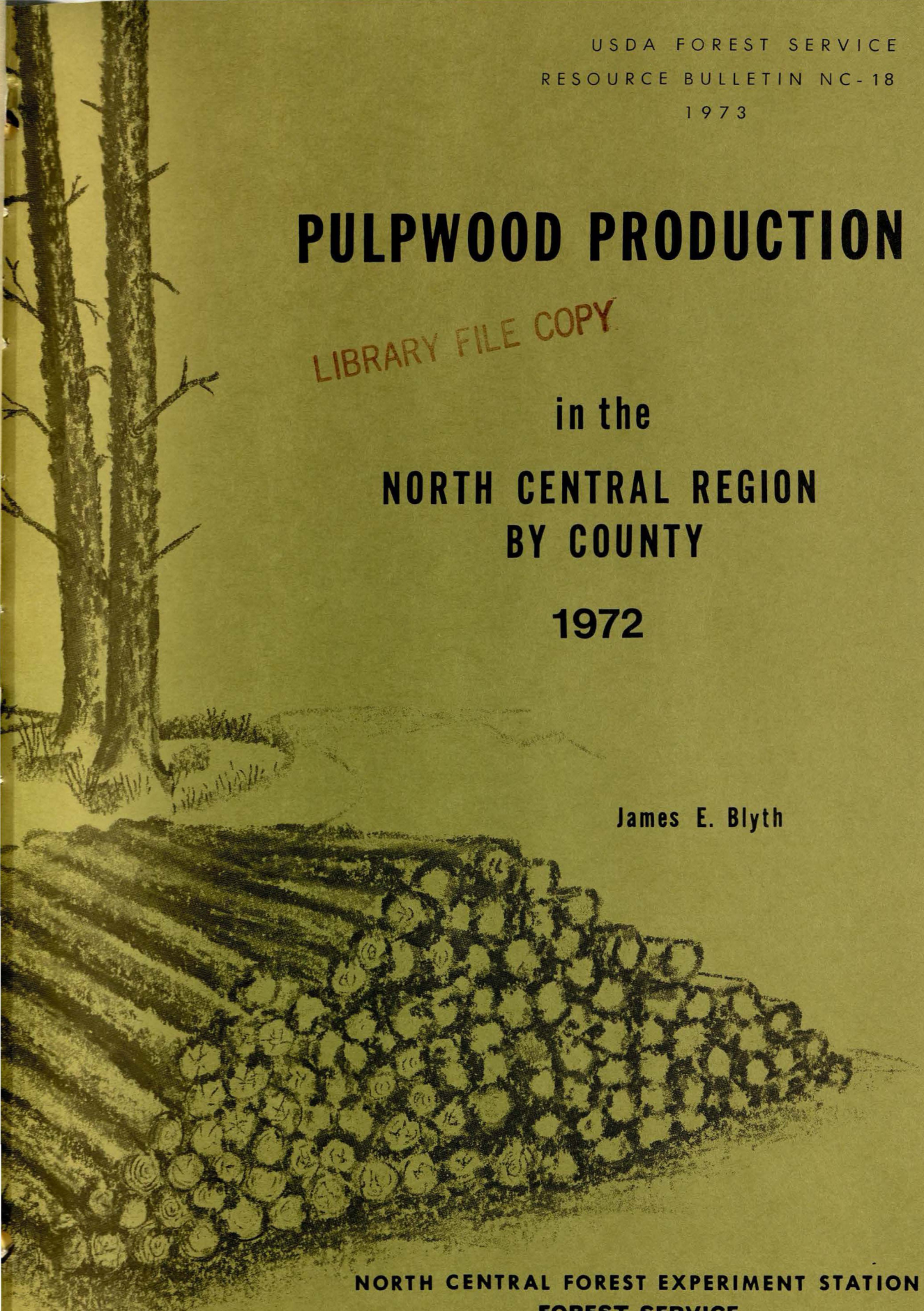
in the

NORTH CENTRAL REGION BY COUNTY

1972



James E. Blyth

NORTH CENTRAL FOREST EXPERIMENT STATION
FOREST SERVICE
U. S. DEPARTMENT OF AGRICULTURE

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Blyth, James E.
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PULPWOOD PRODUCTION IN THE NORTH CENTRAL REGION, BY COUNTY, 1972

James E. Blyth

This is the 14th annual report on the pulpwood harvest in Lake States counties and the 13th annual report on the Central States harvest. The Lake States (Michigan, Minnesota, and Wisconsin) and Central States (Illinois, Indiana, Iowa, and Missouri) are discussed separately because the timber types in each area are different and less information can be released about the Central States--more detailed data published on pulpwood production and receipts in the Central States would reveal the operations of individual mills.

Quantities shown may vary slightly from one table to another because of rounding differences. These differences are insignificant.

Pulpmills using North Central States timber in 1972 reported their pulpwood receipts by State and county. Their cooperation is gratefully acknowledged. Thanks are also due to Al Boelter, Staff Forester, Forest Resource Development, Michigan Department of Natural Resources, for collecting data on the Michigan pulpmills, and to Jerold Hahn of the North Central Station for extensive computer programing and data computations.

LAKE STATES

Lake States pulpwood production climbed 7 percent in 1972.[1/] Mill expansions, rising demand for paper products, and a new mill were major reasons for the increased harvest.

Production at Previous Peak Levels

Pulpwood production in 1972 slightly surpassed the highs set in 1966 and 1970. Only 1 percent of the 4.3 million cords harvested was consumed outside the Lake States (table 1). Ninety-two out of every 100 cords were roundwood (including chips from roundwood); the remainder was residue from local wood-using plants.[2/] Most of the Lake States residue is delivered to pulpmills in chip form; about 5 out of 6 cords are hardwood. Use of Lake States residue for pulp has doubled since 1966.

Except for pine and tamarack, harvests of all reported species increased. Harvesting of miscellaneous hardwoods climbed 176,000 cords, reflecting an easing of species restrictions with improved pulping technology.

Despite the rise in pulpwood output, pulpwood peeled before delivery dropped 158,000 cords from 1971 and constituted only 14 percent of the roundwood (primarily aspen) in 1972. Only 28 percent of the aspen was peeled in 1972: 54 percent in Wisconsin, 20 percent in Michigan, and 9 percent in Minnesota (fig. 1). Rising woods labor costs and greater bark tolerance in pulp are probably the major reasons why less aspen is peeled in the woods.

1972 Pulpwood Production by State

Wisconsin produced 36 percent of the Lake States pulpwood, Michigan 33 percent, and Minnesota 31 percent.

Minnesota boosts output 158,000 cords.--Demand for aspen, balsam fir, and spruce was much stronger than in 1971. Aspen constituted 54 percent of the roundwood harvest followed by pine (17 percent) and spruce (15 percent). Two counties--St. Louis and Koochiching--provided almost half of the roundwood.

Michigan production rises 134,000 cords.--Michigan's harvest surged ahead on strong demand

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1/ Pulpwood production is defined as the pulpwood volume from timber land in a specified area that was received at all mills during 1972, whereas pulpwood receipts are defined as the volume of wood received by mills in a specified area regardless of the geographic source.

2/ Residue is the byproduct from sawmills, veneer mills, cooperage mills, and other wood-using plants that is used for pulping. Residue includes slabs, edgings, veneer cores, sawdust, wood flour, and chips manufactured from these byproducts.

Table 1.--Production and imports of pulpwood, Lake States, 1972

(In standard cords, unpeeled)

SPECIES AND DESTINATION	PRODUCTION BY STATES 1/				IMPORTS			TOTAL RECEIPTS
	MICHIGAN	MINNESOTA	WISCONSIN	REGIONAL TOTAL	OTHER U.S. 2/	CANADA	TOTAL IMPORTS	
ASPEN								
MICHIGAN	321871	0	250	322121	0	0	0	322121
MINNESOTA	0	650789	22000	672789	0	13087	13087	685876
WISCONSIN	207004	35350	659636	901990	0	0	0	901990
EXPORTED 2/	466	2667	2731	5864	0	0	0	0
TOTAL	529341	688806	684617	1902764	0	13087	13087	1909987
BALSAM FIR								
MICHIGAN	27467	0	29	27496	0	0	0	27496
MINNESOTA	0	65037	0	65037	0	0	0	65037
WISCONSIN	32944	352	48765	82061	0	0	0	82061
EXPORTED 2/	0	22	0	22	0	0	0	0
TOTAL	60411	65411	48794	174616	0	0	0	174594
BIRCH								
MICHIGAN	34138	0	375	34513	0	0	0	34513
MINNESOTA	0	41000	0	41000	0	0	0	41000
WISCONSIN	1992	0	45803	47795	0	0	0	47795
EXPORTED 2/	0	1333	667	2000	0	0	0	0
TOTAL	36130	42333	46845	125308	0	0	0	123308
HEMLOCK								
MICHIGAN	22078	0	47	22125	0	0	0	22125
WISCONSIN	27737	0	41624	69361	0	0	0	69361
TOTAL	49815	0	41671	91486	0	0	0	91486
PINE								
MICHIGAN	126655	0	41	126696	384	0	384	127080
MINNESOTA	0	165976	0	165976	0	100	100	166076
WISCONSIN	101908	49491	246078	397477	46003	0	46003	443480
EXPORTED 2/	0	300	0	300	0	0	0	0
TOTAL	228563	215767	246119	690449	46387	100	46487	736636
SPRUCE								
MICHIGAN	14136	0	8	14144	0	0	0	14144
MINNESOTA	0	126981	0	126981	0	1404	1404	128385
WISCONSIN	24264	52556	12879	89699	0	91531	91531	181230
EXPORTED 2/	0	12497	0	12497	0	0	0	0
TOTAL	38400	192034	12887	243321	0	92935	92935	323759
TAMARACK								
MICHIGAN	2523	0	7	2530	0	0	0	2530
MINNESOTA	0	3893	0	3893	0	0	0	3893
WISCONSIN	785	27436	2661	30882	0	0	0	30882
TOTAL	3308	31329	2668	37305	0	0	0	37305
MISC. HARDWOODS								
MICHIGAN	280092	0	1875	281967	0	0	0	281967
MINNESOTA	0	29670	0	29670	0	6425	6425	36095
WISCONSIN	28249	0	325860	354109	0	0	0	354109
EXPORTED 2/	203	447	5306	5956	0	0	0	0
TOTAL	308544	30117	333041	671702	0	6425	6425	672171
CEDAR								
MICHIGAN	3784	0	0	3784	0	0	0	3784
TOTAL	3784	0	0	3784	0	0	0	3784
TOTAL ROUNDWOOD								
MICHIGAN	832744	0	2632	835376	384	0	384	835760
MINNESOTA	0	1083346	22000	1105346	0	21016	21016	1126362
WISCONSIN	424883	165185	1383306	1973374	46003	91531	137534	2110908
EXPORTED 2/	669	17266	8704	26639	0	0	0	0
TOTAL	1258296	1265797	1416642	3940735	46387	112547	158934	4073030
RESIDUE,SOFTWOOD								
MICHIGAN	9234	0	0	9234	0	0	0	9234
MINNESOTA	0	22076	0	22076	0	946	946	23022
WISCONSIN	2637	1054	10168	13859	183842	131	183973	197832
EXPORTED 2/	9007	2179	401	11587	0	0	0	0
TOTAL	20878	25309	10569	56756	183842	1077	184919	230088
RESIDUE,HARDWOOD								
MICHIGAN	75184	0	0	75184	11149	0	11149	86333
MINNESOTA	0	62568	6153	68721	2235	3710	5945	74666
WISCONSIN	42058	0	99474	141532	0	0	0	141532
EXPORTED 2/	4322	0	4697	9019	0	0	0	0
TOTAL	121564	62568	110324	294456	13384	3710	17094	302531
ALL WOOD MATERIAL								
MICHIGAN	917162	0	2632	919794	11533	0	11533	931327
MINNESOTA	0	1167990	28153	1196143	2235	25672	27907	1224050
WISCONSIN	469578	166239	1492948	2128765	229845	91662	321507	2450272
EXPORTED 2/	13998	19445	13802	47245	0	0	0	0
TOTAL	1400738	1353674	1537535	4291947	243613	117334	360947	4605649

1/ VERTICAL COLUMNS OF FIGURES UNDER BOX HEADING -PRODUCTION BY STATES- PRESENT THE AMOUNT OF PULPWOOD CUT IN EACH STATE

2/ MOSTLY WESTERN STATES.

3/ PULPWOOD SHIPPED TO MILLS OUTSIDE OF REGION.

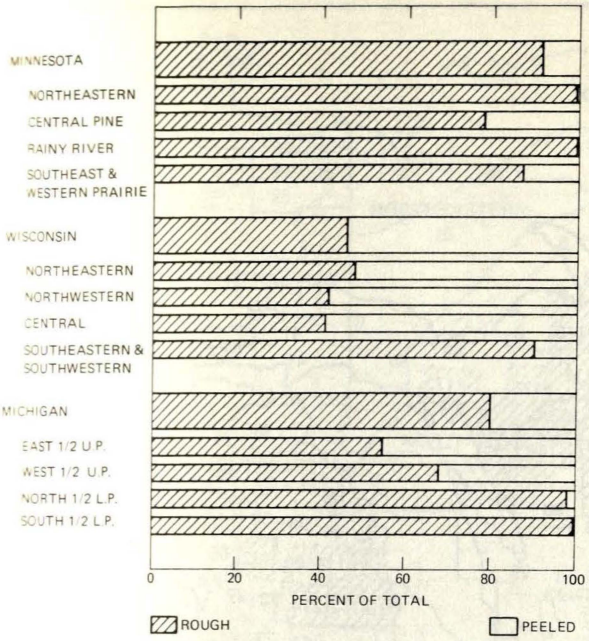


Figure 1.--Percent of rough and peeled aspen roundwood production by State and Forest Survey Unit, 1972.

for miscellaneous hardwoods. Logging activity expanded in all areas of Michigan but was most vigorous in the Western Upper Peninsula. Top-producing counties were Dickinson, Iron, and Marquette.

Wisconsin production stable.--Aspen output dropped 7 percent but was offset by a 24-percent gain in miscellaneous hardwoods. Harvesting declined in northeast Wisconsin, but rose slightly to moderately in the other Units. Oneida, Price, and Marinette County loggers cut the largest pulpwood volumes.

The distribution of the harvest is shown in two ways: first, the amount of pulpwood cut relative to commercial forest area (fig. 2); second, the amount of pulpwood cut relative to the merchantable volume in major pulpwood species (fig.3). Seventeen Wisconsin counties, 13 in Michigan and 7 in Minnesota, each furnished more than 100 cords of pulpwood per 1,000 acres of stocked commercial forest land. Cutting pressure was greatest per 1,000 cords of merchantable volume in principal pulpwood species in central and northeast Wisconsin and western Upper Michigan.

Receipts Increase 6 Percent

Forty-three Lake States plants received 4.6 million cords of pulpwood in 1972. Of these plants, 38 used aspen, 18 used spruce, and 16 used balsam fir (table 2). One more plant began using wood chips from residue.

Except for pine and tamarack, receipts of every species rose in 1972. Deliveries of miscellaneous hardwoods in the Lake States were 150,000 cords higher than the previous peak. Softwood residue receipts increased for the seventh straight year.

Hardwoods are becoming a more important component of the pulpwood used in the Lake States. Of the 1972 wood receipts, 65 percent was hardwood compared with 58 percent in 1964 and 61 percent in 1968.

Two-thirds of the imported wood came from other States, the remainder came from Canada. Wyoming, South Dakota, Montana, and Idaho each furnished more than 25,000 cords of softwood residue, primarily as chips. Although softwood roundwood imports from Canada rebounded, they were relatively low. The abrupt decline in purchases of Canadian softwood roundwood in recent years is probably caused by higher delivered wood prices resulting from increases in logging labor costs in Canada.

Pulpwood marketing in Michigan expanded broadly in 1972. Receipts rose 231,000 cords from 1971 with every species group increasing except spruce. Purchases of miscellaneous hardwoods were particularly large.

Pulpwood demand in Minnesota was also higher by 161,000 cords. Aspen receipts advanced 17 percent, accounting for three-fifths of the increase.

In Wisconsin, pulpwood receipts fell 5 percent. In contrast to Minnesota, aspen procurement fell more than 100,000 cords. Pine receipts plunged 71,000 cords; miscellaneous hardwoods receipts rose 59,000 cords.

Regional Mill Capacity Tops 10,000 Tons

Opening of a new mill helped raise the Lake States mill capacity by about 7 percent (table 3). Two small mills closed during 1972 and two other mills are expected to change ownership. Mill capacity will probably remain stable during 1973.

CENTRAL STATES

Central States pulpwood production continued its upward trend for the fifth straight year. The advance was widespread--every State, species group, and residue category showed an increase. More exports to mills in adjacent States stimulated the rise in output. Hardwood residue was the most important component of total production (table 4).

Production Approaches Half Million Cords

Central States 1972 pulpwood production was 463,000 cords, double that reported in 1965. During

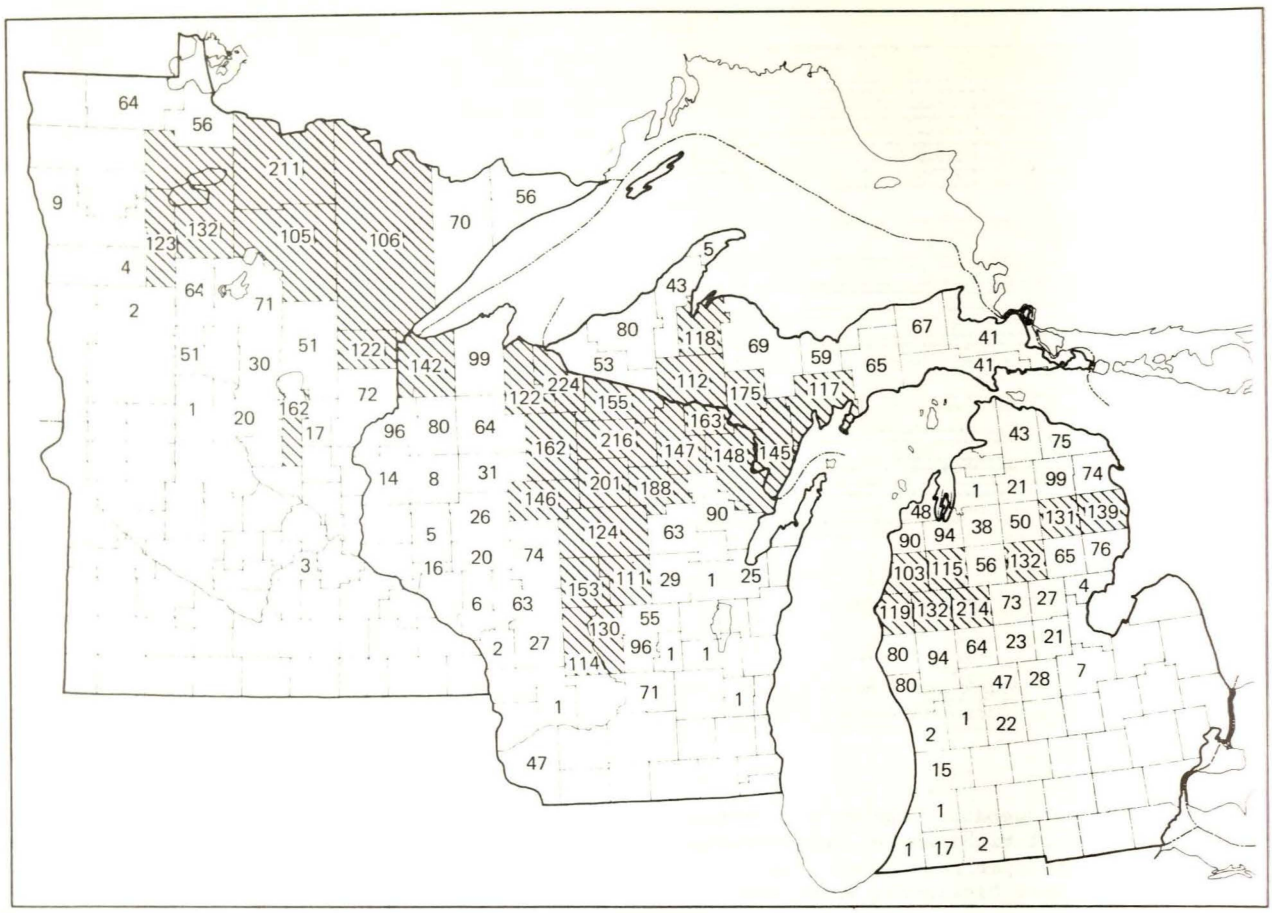


Figure 2.--Cords of pulpwood cut per 1,000 acres of stocked commercial forest land in principal pulpwood-producing counties, 1972. Cross-hatching shows counties that supplied 100 or more cords of pulpwood per 1,000 acres of stocked commercial forest land.

this same period, pulp mills increased their use of Central States hardwood residue almost nine-fold. One-third of the wood, primarily hardwood residue and hard hardwood roundwood, was exported in 1972; Kentucky was the principal customer, with the remainder shipped to Ohio, Michigan, Louisiana, and Minnesota.

Indiana, Illinois, and Missouri each produced more pulpwood than ever before. Indiana producers now market more pulpwood outside the Central States than within (table 5). If the rate of change in recent years continues, Missouri pulpwood output will overtake that of Indiana and Illinois in 2 to 5 years. Iowa production has held steady for 3 years.

Loggers cut pulpwood in 117 counties: 40 in Indiana, 36 in Illinois, 29 in Missouri, and 12 in Iowa (fig. 4). Procurement areas were similar to those in 1971. A few additional counties in central and west central Indiana supplied pulpwood in 1972.

Receipts Inch Up 5 Percent

Thirteen Central States plants procured 356,000 cords in 1972 as receipts continued to remain in the narrow range of recent years (table 6). The additional receipts over 1971 were mainly hardwood residue. Changes in roundwood procurement were insignificant. Central States mills obtained 1 out of 7 cords from other States; more than half came from the Lake States. Much of the imported wood was residue.

Pulping capacity remained at about 1,500 tons per day (table 7). No major capacity changes were announced by resident mills. Mills in adjacent States are likely to continue expanding their wood purchases in Illinois, Indiana, and Missouri.

* * *

Other detailed pulpwood production data are found in the Appendix.

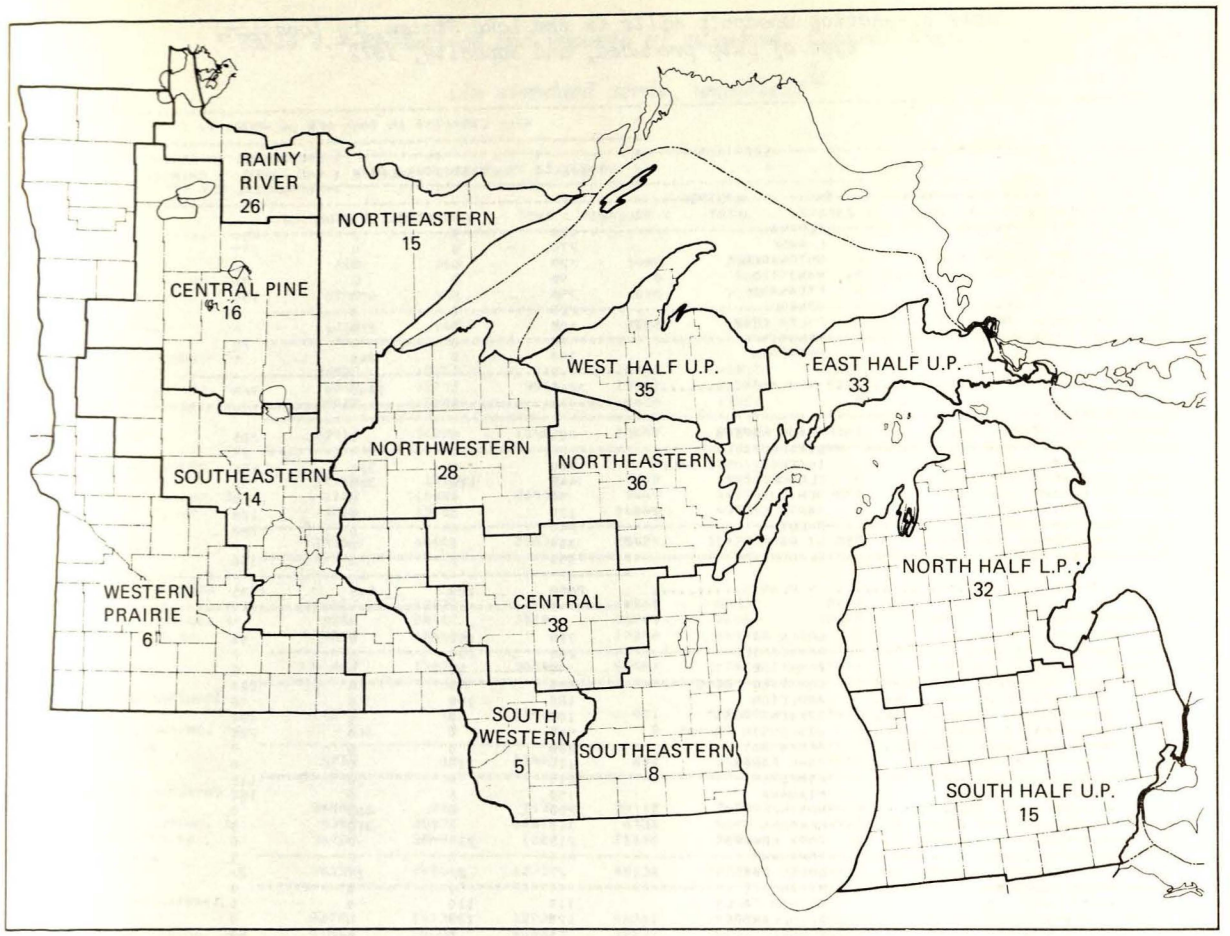


Figure 3.--Cords of pulpwood bolts and logs harvested per 1,000 cords of merchantable volume in principal pulpwood species by Forest Survey Unit, 1972. The heavy lines delineate the boundaries of the Forest Survey Units in each State.

Table 2.--Plants using the different species of wood for pulping in 1972

(In numbers)

Species and kind of material	Lake States	Minnesota	Wisconsin	Michigan
Aspen	38	9	22	7
Balsam fir	16	5	7	4
Birch	11	1	6	4
Hemlock	7	--	6	1
Pine	11	2	5	4
Spruce	18	5	11	2
Tamarack	6	2	3	1
Miscellaneous hardwoods	15	1	8	6
Wood chips	13	2	6	5
Slabwood and other residue	5	1	3	1
Total plants	43	9	25	9

Table 3.--Active woodpulp mills in the Lake States, by location, type of pulp produced, and capacity, 1972

COMPANY	LOCATION	MILL CAPACITY IN TONS PER 24 HOURS 1/				
		TOTAL	SULFITE	SULFATE	GROUNDWOOD AND OTHER MECHANICAL	SEMI-CHEMICAL
MICHIGAN:						
ARTITBI CORP.	ALPENA	430	0	0	430	0
CELOTEX CORP.	L ANSE	270	0	0	270	0
HOERNER WALDORF CORP.	ONTONAGON	220	0	0	0	220
MANISTIQUE PULP AND PAPER CO.	MANISTIQUE	90	0	0	90	0
MEAD CORP.	ESCANABA	750	0	600	150	0
MENASHA CORP.	OTSEGO	225	0	0	0	225
PACKAGING CORP.OF AMERICA	FILER CITY	600	0	200	0	400
SCOTT PAPER CO.	MENOMINEE	20	0	0	20	0
WARREN CO., S.D.	MUSKEGON	240	0	240	0	0
TOTAL ..... 9 PLANTS.....		2845	0	1040	960	845
MINNESOTA :						
BLANDIN PAPER CO.	GRAND RAPIDS	205	0	0	205	0
HENNEPIN PAPER CO.	LITTLE FALLS	75	0	0	75	0
BOISE CASCADE CORP.	INTERNATIONAL FALLS	770	0	320	450	0
NORTHWEST PAPER CO.	CLOQUET	445	120	325	0	0
SUPERWOOD CORP.	BEMIDJI	90	0	0	90	0
ST REGIS PAPER CO.	SARTELL	125	0	0	125	0
SUPERWOOD CORP.	DULUTH	240	0	0	240	0
HOERNER WALDORF CORP.	ST PAUL	300	0	0	0	300
CONWED CORP.	CLOQUET	350	0	0	350	0
TOTAL ..... 9 PLANTS.....		2600	120	645	1535	300
WISCONSIN :						
AMERICAN CAN CO.	GREEN BAY	210	150	0	60	0
AMERICAN CAN CO.	ROTHSCHILD	200	200	0	0	0
BADGER PAPER MILLS	PESHTIGO	90	90	0	0	0
APPLETON PAPERS INC.	COMBINED LOCKS	200	0	0	200	0
CONSOLIDATED PAPERS , INC.	APPLETON	180	180	0	0	0
CONSOLIDATED PAPERS , INC.	STEVENS POINT	100	0	0	100	0
CONSOLIDATED PAPERS , INC.	WISCONSIN RAPIDS	565	0	360	205	0
GREEN BAY PACKAGING, INC.	GREEN BAY	200	0	0	0	200
KANSAS CITY STAR CO.	PARK FALLS	115	115	0	0	0
KIMBERLY-CLARK CORP.	KIMBERLY	115	0	0	115	0
PENTAIR INDUSTRIES	NIAGARA	150	0	0	150	0
MOSINEE PAPER MILLS CO.	MOSINEE	200	0	200	0	0
NEKOOSA-EDWARDS PAPER CO.	NEKOOSA	310	0	310	0	0
NEKOOSA-EDWARDS PAPER CO.	PORT EDWARDS	215	215	0	0	0
OWENS-ILLINOIS	TOMAHAWK	615	0	0	0	615
CHARMIN PAPER PRODUCTS CO.	GREEN BAY	2/	2/	2/	2/	2/
SCOTT PAPER CO.	MARINETTE	50	50	0	0	0
SCOTT PAPER CO.	OCONTO FALLS	110	110	0	0	0
ST REGIS PAPER CO.	RHINELANDER	120	120	0	0	0
ST REGIS PAPER CO.	CORNELL	50	0	0	50	0
SUPERIOR FIBRE PRODUCTS CO.	SUPERIOR	180	0	0	180	0
THILMANY PULP AND PAPER CO	KAUKAUNA	400	0	400	0	0
TOMAHAWK PULP CO., INC.	TOMAHAWK	50	0	0	50	0
WAUSAU PAPER MILLS CO.	BROKAW	145	145	0	0	0
EVANS PRODUCTS CO.	PHILLIPS	100	0	0	100	0
TOTAL ..... 25 PLANTS.....		4670	1375	1270	1210	815
ALL STATES	43 PLANTS	10115	1495	2955	3705	1960

1/ LOCKWOOD S DIRECTORY OF THE PAPER AND ALLIED INDUSTRIES-1973,AND 1973 DIRECTORY OF THE FOREST PRODUCTS INDUSTRY.
2/ CAPCITY NOT AVAILABLE.

Table 4.--Production and imports of pulpwood, Central States, 1972

(In standard cords, unpeeled) 1/

SPECIES AND DESTINATION	PROUCTION BY STATES 2/					IMPORTS			TOTAL RECEIPTS
	ILLINOIS	INDIANA	IOWA	MISSOURI	REGIONAL TOTAL	LAKE STATES	OTHER U.S.	TOTAL IMPORTS	
SOFTWOODS									
ILLINOIS	400	263	0	1980	2643	0	0	0	2643
IND.,IOWA,MO. 3/	0	0	0	0	0	0	200	200	200
EXPORTED 4/	1338	384	0	608	2330	0	0	0	0
TOTAL	1738	647	0	2588	4973	0	200	200	2843
SOFT HARDWOODS									
ILLINOIS	26835	12363	111	3728	43037	2222	0	2222	45259
IND.,IOWA,MO. 3/	4049	10257	9951	17292	41549	6799	889	7688	49237
EXPORTED 4/	2027	9200	0	2430	13657	0	0	0	0
TOTAL	32911	31820	10062	23450	98243	9021	889	9910	94496
HARD HARDWOODS									
ILLINOIS	17198	1313	0	1140	19651	0	0	0	19651
IND.,IOWA,MO. 3/	4103	10205	20837	9449	44594	3880	968	4848	49442
EXPORTED 4/	2033	33085	0	14840	49958	0	0	0	0
TOTAL	23334	44603	20837	25429	114203	3880	968	4848	69093
TOTAL ROUNDWOOD									
ILLINOIS	44433	13939	111	6848	65331	2222	0	2222	67553
IND.,IOWA,MO. 3/	8152	20462	30788	26741	86143	10679	2057	12736	98879
EXPORTED 4/	5398	42669	0	17878	65945	0	0	0	0
TOTAL	57983	77070	30899	51467	217419	12901	2057	14958	166432
RESIDUE,SOFTWOOD									
ILLINOIS	6279	18	11482	881	18660	9408	5402	14810	33470
IND.,IOWA,MO. 3/	0	0	0	0	0	0	3752	3752	3752
TOTAL	6279	18	11482	881	18660	9408	9154	18562	37222
RESIDUE,HARDWOOD									
ILLINOIS	36068	282	1136	39112	76598	4474	1322	5796	82394
IND.,IOWA,MO. 3/	8388	36032	10072	4336	58828	4545	6465	11010	69838
EXPORTED 4/	30729	38490	1029	21686	91934	0	0	0	0
TOTAL	75185	74804	12237	65134	227360	9019	7787	16806	152232
ALL WOOD MATERIAL									
ILLINOIS	86780	14239	12729	46841	160589	16104	6724	22828	183417
IND.,IOWA,MO. 3/	16540	56494	40860	31077	144971	15224	12274	27498	172469
EXPORTED 4/	36127	81159	1029	39564	157879	0	0	0	0
TOTAL	139447	151892	54618	117482	463439	31328	18998	50326	355886

1/ FACTORS USED IN CONVERTING TO STANDARD GREEN CORDS (128 CU. FT.) WERE:
4,500 POUNDS OF SOFT HARDWOOD ROUNDWOOD;
5,000 POUNDS OF HARD HARDWOOD OR CONIFEROUS ROUNDWOOD;
4,100 POUNDS OF SOFTWOOD CHIPS (GREEN);
4,400 POUNDS OF HARDWOOD CHIPS (GREEN);
2,500 POUNDS OF CHIPS (ALL SPECIES,DRY).

2/ VERTICAL COLUMNS OF FIGURES UNDER BOX HEADING -PRODUCTION BY STATES- PRESENT THE AMOUNT OF PULPWOOD CUT IN EACH STATE.

3/ COMBINED TO PREVENT DISCLOSURE OF INDIVIDUAL MILL RECEIPTS.

4/ PULPWOOD SHIPPED TO MILLS OUTSIDE THE REGION.

Table 5.--Central States pulpwood production by state and destination, 1968-1972

(In thousand cords)

Year	Illinois			Indiana			Iowa			Missouri		
	Total	Destination		Total	Destination		Total	Destination		Total	Destination	
		Central States	Other States		Central States	Other States		Central States	Other States		Central States	Other States
1968	115	115	--	118	102	16	38	37	1	62	62	*
1969	132	128	4	132	107	25	31	30	1	81	71	10
1970	118	110	8	148	95	53	58	57	1	82	57	25
1971	133	99	34	139	77	62	53	52	1	97	62	35
1972	139	103	36	152	71	81	55	54	1	117	78	39

* Less than 500 cords.

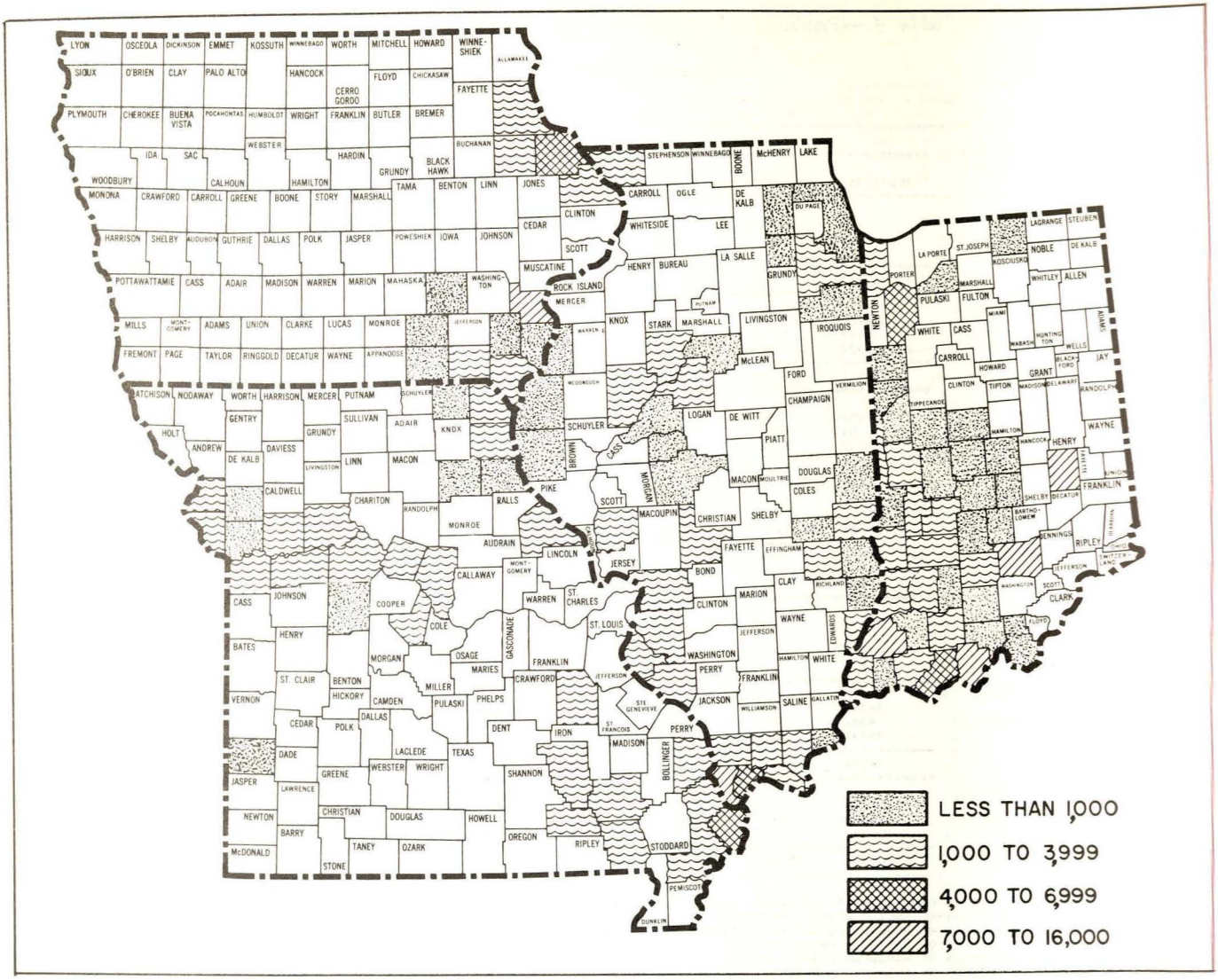


Figure 4.--Harvest of pulpwood bolts in the Central States, by counties, in standard cords, 1972.

Table 6.--Trends in receipts of roundwood and residue as pulpwood, Central States, 1968-1972

(In thousand cords, unpeeled)

Type of material and area	1968	1969	1970	1971	1972
Roundwood					
Illinois	68	50	62	57	67
Indiana, Iowa, Missouri	156	146	131	107	99
Total	224	196	193	164	166
Residue					
Illinois	92	135	100	107	116
Indiana, Iowa, Missouri	50	64	68	67	74
Total	142	199	168	174	190
All material	366	395	361	338	356

Table 7.--Active woodpulp mills in the Central States, by location, type of pulp produced, and capacity, 1972

COMPANY	LOCATION	MILL CAPACITY IN TONS PER 24 HOURS 1/				
		TOTAL	SULFITE	SULFATE	GROUNDWOOD AND OTHER MECHANICAL	SEMI-CHEMICAL
ILLINOIS:						
ALTON BOX BOARD CO.	ALTON	300	0	0	0	300
BIRD AND SON , INC.	CHICAGO	40	0	0	40	0
CELOTEX CORP.	PEORIA	190	0	0	190	0
CERTAIN-TEED PRODUCTS CORP.	EAST ST LOUIS	100	0	0	100	0
FLINTKOTE CO , THE	MT CARMEL	40	0	0	40	0
GAF CORP.	JOLIET	100	0	0	100	0
JOHNS-MANVILLE PRODUCTS CORP.	WAUKEGAN	65	0	0	65	0
CELOTEX CORP.	WILMINGTON	30	0	0	30	0
TOTAL.....	8 PLANTS.....	865	0	0	565	300
INDIANA :						
WESTON PAPER AND MFG. CO.	TERRE HAUTE	270	0	0	0	270
TOTAL.....	1 PLANT.....	270	0	0	0	270
IOWA :						
CELOTEX CORP.	DUBUQUE	90	0	0	0	90
CONSOLIDATED PACKAGING CORP.	FORT MADISON	140	0	0	0	140
TOTAL.....	2 PLANTS.....	230	0	0	0	230
MISSOURI :						
GAF CORP.	KANSAS CITY	90	0	0	90	0
HUEBERT FIBREBOARD, INC.	BOONEVILLE	60	0	0	60	0
TOTAL.....	2 PLANTS.....	150	0	0	150	0
ALL STATES	13 PLANTS	1515	0	0	715	800

1/ LOCKWOOD S DIRECTORY OF THE PAPER AND ALLIED INDUSTRIES-1973,AND 1973 DIRECTORY OF THE FOREST PRODUCTS INDUSTRY.
2/ CAPCITY NOT AVAILABLE.

APPENDIX

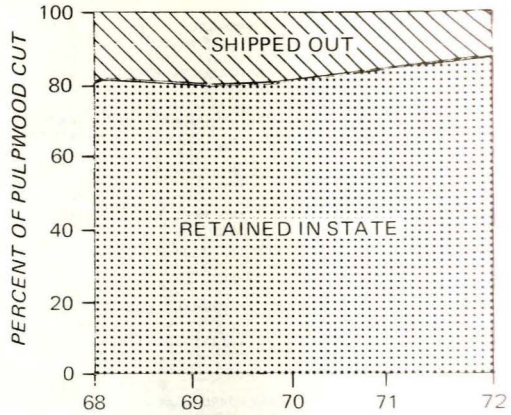
Table 8.--Lake States pulpwood production, by state of origin and destination, 1968-1972

(In thousand standard cords)

MINNESOTA

Year	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
1968	1,087	900	166	*	21
1969	1,192	977	188	--	27
1970	1,224	981	219	*	24
1971	1,196	992	188	*	16
1972	1,354	1,168	166	--	20
5-year average	1,211	1,004	185	*	22

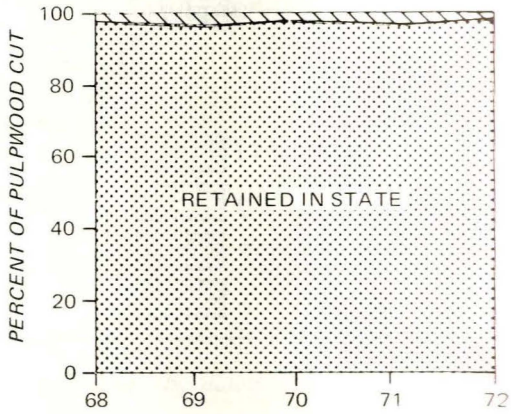
* Less than 500 cords.



MICHIGAN

Year	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
1968	1,168	--	455	702	11
1969	1,302	--	537	752	13
1970	1,406	--	610	785	11
1971	1,267	--	567	688	12
1972	1,401	--	470	917	14
5-year average	1,309	--	528	769	12

* Less than 500 cords.



WISCONSIN

Year	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
1968	1,297	22	1,259	4	12
1969	1,450	17	1,412	9	12
1970	1,656	11	1,627	10	8
1971	1,552	35	1,502	*	15
1972	1,537	28	1,493	2	14
5-year average	1,498	23	1,458	5	12

* Less than 500 cords.

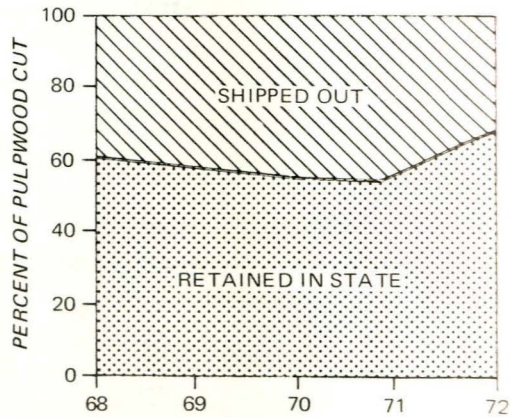


Table 9.--Lake States pulpwood production, by Forest Survey Unit and destination by state, 1972

(In hundred standard cords, roughwood basis)

MICHIGAN

UNIT	TOTAL CUT	DESTINATION OF PULPWOOD			
		MICHIGAN	MINNESOTA	WISCONSIN	OTHER
E.1/2 UP. PENINSULA	3440	1414	0	1911	115
W.1/2 UP. PENINSULA	4602	1794	0	2785	23
N.1/2 LOW. PENINSULA	5385	5383	0	0	2
S.1/2 LOW. PENINSULA	581	581	0	0	0
TOTAL	14008	9172	0	4696	140

MINNESOTA

UNIT	TOTAL CUT	DESTINATION OF PULPWOOD			
		MICHIGAN	MINNESOTA	WISCONSIN	OTHER
NORTHEASTERN	4916	0	3981	887	48
CENTRAL PINE	4652	0	3908	700	44
RAINY RIVER	3252	0	3090	59	103
SOUTHEASTERN	582	0	577	5	0
WESTERN PRAIRIE	135	0	124	11	0
TOTAL	13537	0	11680	1662	195

WISCONSIN

UNIT	TOTAL CUT	DESTINATION OF PULPWOOD			
		MICHIGAN	MINNESOTA	WISCONSIN	OTHER
NORTHEASTERN	6550	26	0	6520	4
NORTHWESTERN	5796	0	220	5563	13
CENTRAL	2470	0	15	2455	0
SOUTHWESTERN	357	0	46	198	113
SOUTHEASTERN	201	0	0	193	8
TOTAL	15374	26	281	14929	138

Table 10.--Lake States pulpwood production by species, state, and Survey Unit, 1968-1972

(In thousand standard cords, roughwood basis)

MINNESOTA

Unit	ASPEN Annual production					BALSAM FIR Annual production				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Northeastern	203	204	208	205	241	12	10	9	9	9
Central Pine	218	289	249	246	260	18	18	22	20	26
Rainy River	131	148	127	135	160	13	12	14	11	31
Southeastern	3	5	11	20	25	*	--	*	--	--
Western Prairie	28	14	5	2	3	--	--	--	--	--
Total	583	660	600	608	689	43	40	45	40	66
WISCONSIN										
Northeastern	369	416	430	402	349	25	28	40	35	25
Northwestern	202	244	296	302	311	22	22	29	19	23
Central	55	35	44	31	23	4	*	*	*	1
Southwestern	1	*	*	--	1	--	--	--	--	--
Southeastern	2	2	1	1	*	--	--	--	--	--
Total	629	697	771	736	684	51	50	69	54	49
MICHIGAN										
E. 1/2 Upper Peninsula	95	119	124	125	89	39	27	41	26	33
W. 1/2 Upper Peninsula	167	184	180	177	188	22	16	25	25	24
N. 1/2 Lower Peninsula	274	296	288	242	241	1	1	*	1	3
S. 1/2 Lower Peninsula	5	7	4	3	11	--	--	--	--	--
Total	541	606	596	547	529	62	44	66	52	60
LAKE STATES	1,753	1,963	1,967	1,891	1,902	156	134	180	146	175

*Less than 500 cords.

(Continued on next page)

MINNESOTA

Unit	BIRCH Annual production					HEMLOCK Annual production				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Northeastern	*	3	17	8	15	--	--	--	--	--
Central Pine	1	*	12	26	26	--	--	--	--	--
Rainy River	--	--	2	1	1	--	--	--	--	--
Southeastern	--	--	--	*	*	--	--	--	--	--
Western Prairie	--	--	*	--	--	--	--	--	--	--
Total	1	3	31	35	42	--	--	--	--	--
WISCONSIN										
Northeastern	18	23	32	22	20	22	32	33	28	26
Northwestern	35	37	42	28	26	18	16	16	13	13
Central	3	3	2	1	*	4	3	3	1	2
Southwestern	--	--	--	--	1	--	--	--	--	--
Southeastern	*	--	--	--	--	*	--	--	--	--
Total	56	63	76	51	47	44	51	52	42	41
MICHIGAN										
E. 1/2 Upper Peninsula	2	1	4	1	10	9	11	17	8	17
W. 1/2 Upper Peninsula	*	1	2	3	7	36	52	52	34	33
N. 1/2 Lower Peninsula	11	21	27	19	19	--	*	*	*	--
S. 1/2 Lower Peninsula	--	*	--	--	--	--	--	--	--	--
Total	13	23	33	23	36	45	63	69	42	50
LAKE STATES	70	89	140	109	125	89	114	121	84	91

* Less than 500 cords.

MINNESOTA

Unit	JACK PINE[1/] Annual production					SPRUCE Annual production				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Northeastern	121	133	123	119	121	66	66	64	64	76
Central Pine	62	74	68	57	66	31	27	31	29	35
Rainy River	12	18	19	26	19	60	60	85	74	80
Southeastern	--	*	1	*	1	--	*	*	--	--
Western Prairie	8	12	10	12	9	--	1	1	1	1
Total	203	237	221	214	216	157	154	181	168	192
WISCONSIN										
Northeastern	46	63	72	68	53	7	10	12	9	9
Northwestern	57	77	96	105	99	3	3	4	3	4
Central	94	75	87	93	90	1	*	*	*	*
Southwestern	1	*	2	1	2	--	--	--	--	--
Southeastern	1	1	2	1	2	--	--	--	--	--
Total	199	216	259	268	246	11	13	16	12	13
MICHIGAN										
E. 1/2 Upper Peninsula	39	59	57	80	84	23	20	29	22	20
W. 1/2 Upper Peninsula	33	38	34	41	37	16	18	22	22	18
N. 1/2 Lower Peninsula	131	109	145	110	102	*	1	*	1	--
S. 1/2 Lower Peninsula	2	1	4	4	5	--	--	--	--	--
Total	205	207	240	235	228	39	39	51	45	38
LAKE STATES	607	660	720	717	690	207	206	248	225	243

* Less than 500 cords

1/ Includes small quantity of red and white pine.

(Continued on next page)

MINNESOTA

Unit	TAMARACK Annual production					MISCELLANEOUS HARDWOODS Annual production				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Northeastern	4	4	5	4	4	7	11	14	12	11
Central Pine	16	14	23	22	19	5	11	3	*	1
Rainy River	4	2	7	5	8	9	8	9	9	18
Southeastern	*	--	--	--	--	1	1	1	9	--
Western Prairie	1	1	1	1	*	1	1	--	--	--
Total	25	21	36	32	31	23	32	27	30	30
WISCONSIN										
Northeastern	3	1	2	2	2	60	87	110	105	128
Northwestern	2	1	2	1	1	50	61	79	67	84
Central	*	*	*	*	*	68	81	99	89	111
Southwestern	--	--	--	--	--	4	5	4	5	5
Southeastern	--	--	--	--	--	3	4	4	3	5
Total	5	2	4	3	3	185	238	296	269	333
MICHIGAN										
E. 1/2 Upper Peninsula	1	1	2	1	2	3	10	18	14	50
W. 1/2 Upper Peninsula	1	1	1	2	1	48	38	28	41	97
N. 1/2 Lower Peninsula	--	--	--	--	--	116	141	143	136	153
S. 1/2 Lower Peninsula	--	--	--	--	--	4	7	7	6	9
Total	2	2	3	3	3	171	196	196	197	309
LAKE STATES	32	25	43	38	37	379	466	519	496	672

* Less than 500 cords.

MINNESOTA

Unit	RESIDUE Annual production					ALL SPECIES[1] Annual production				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Northeastern	8	6	12	12	15	421	437	452	433	492
Central Pine	12	4	28	26	33	363	437	436	426	466
Rainy River	11	5	5	8	8	240	253	268	269	325
Southeastern	21	30	38	23	32	25	36	51	52	58
Western Prairie	--	--	--	--	--	38	29	17	16	13
Total	52	45	83	69	88	1,087	1,192	1,224	1,196	1,354
WISCONSIN										
Northeastern	53	49	43	42	43	603	709	774	713	655
Northwestern	21	17	17	17	18	410	478	581	555	579
Central	16	16	20	24	20	245	213	255	239	247
Southwestern	16	27	24	26	27	22	32	30	32	36
Southeastern	11	11	9	8	13	17	18	16	13	20
Total	117	120	113	117	121	1,297	1,450	1,656	1,552	1,537
MICHIGAN										
E. 1/2 Upper Peninsula	2	29	37	40	36	213	277	329	317	344
W. 1/2 Upper Peninsula	34	54	63	36	54	357	402	407	381	460
N. 1/2 Lower Peninsula	16	6	12	12	20	549	575	615	521	538
S. 1/2 Lower Peninsula	38	33	40	35	33	49	48	55	48	58
Total	90	122	152	123	143	1,168	1,302	1,406	1,267	1,400
LAKE STATES	259	287	348	309	352	3,552	3,944	4,286	4,015	4,291

1/ Including residues and small quantity of cedar not shown in other parts of table.

Table 11.--Lake States pulpwood production by county and species, 1972

(In hundred standard cords, roughwood basis)

UNIT 1/ AND COUNTY	ALL SPECIES	ASPEN	BALSAM	BIRCH	HEM-LOCK	PINE	SPRUCE	TAM-ARACK	MISC. HDWDS.	CEDAR	2/ RESIDUES
E.1/2 UP. PENINSULA											
ALGER	314	27	26	17	25	110	13	3	89	4	
CHIPPEWA	315	15	31	5	18	176	25	2	40	3	
DELTA	721	220	99	29	41	154	48	3	124	3	
LUCE	351	17	32	10	27	169	38	3	50	5	
MACKINAC	227	24	18	14	12	64	13	1	79	2	
MENOMINEE	736	501	78	13	24	16	35	4	63	2	
SCHOOLCRAFT	411	87	48	14	21	149	33	2	54	3	
TOTAL	3439	891	332	102	168	838	205	18	499	22	364
W.1/2 UP. PENINSULA											
BARAGA	624	301	16	18	46	93	25	3	118	4	
DICKINSON	779	575	49	8	38	21	40	3	43	2	
GOGEBIC	336	120	22	2	98	20	3	0	71	0	
HOUGHTON	236	144	5	3	24	7	7	R	46	R	
IRON	762	398	69	4	43	24	37	1	186	R	
KEWEENAW	11	0	6	0	0	0	5	0	0	0	
MARQUETTE	744	181	74	27	52	203	60	6	133	8	
ONTONAGON	570	156	2	7	29	2	2	R	372	R	
TOTAL	4601	1875	243	69	330	370	179	13	969	14	539
N.1/2 LOW. PENINSULA											
ALCONA	440	263	1	27	0	22	0	0	127	0	
ALPENA	151	77	9	12	0	15	0	0	38	0	
ANTRIM	2	0	0	0	0	2	0	0	0	0	
ARENAC	3	3	0	R	0	0	0	0	R	0	
BENZIE	108	64	0	7	0	1	0	0	36	0	
CHEBOYGAN	141	93	R	17	0	4	0	0	27	0	
CLARE	163	113	0	10	0	3	0	0	37	0	
CRAWFORD	149	16	R	0	0	122	0	0	11	0	
GLADWIN	49	20	0	1	0	19	0	0	9	0	
GRAND TRAVERSE	146	79	0	8	0	16	0	0	43	0	
IOSCO	181	12	0	1	0	162	0	0	6	0	
ISABELLA	22	19	0	0	0	0	0	0	3	0	
KALKASKA	101	41	R	3	0	42	0	0	15	0	
LAKE	380	85	0	2	0	93	0	0	200	0	
LEELANAU	52	32	0	4	0	0	0	0	16	0	
MANISTEE	222	85	0	5	0	22	0	0	110	0	
MASON	182	74	0	5	0	33	0	0	70	0	
MECOSTA	89	43	0	R	0	9	0	0	37	0	
MIDLAND	34	32	0	0	0	0	0	0	2	0	
MISSAUKEE	125	73	0	6	0	10	0	0	36	0	
MONTMORENCY	279	178	2	10	0	15	0	0	74	0	
NEWAYGO	284	117	0	4	0	26	0	0	137	0	
OCEANA	116	29	0	1	0	6	0	0	80	0	
OGEMAW	155	50	1	3	0	80	0	0	21	0	
OSCEOLA	361	230	0	12	0	10	0	0	109	0	
OSCODA	391	184	0	15	0	85	0	0	107	0	
OTSEGO	51	31	0	1	0	9	0	0	10	0	
PRESQUE ISLE	211	124	11	26	0	30	0	0	20	0	
ROSCOMMON	348	151	5	4	0	79	0	0	109	0	
WEXFORD	248	91	0	6	0	108	0	0	43	0	
TOTAL	5381	2409	29	190	0	1023	0	0	1533	0	197
S.1/2 LOW. PENINSULA											
ALLEGAN	20	6	0	0	0	3	0	0	11	0	
BARRY	0	0	0	0	0	0	0	0	R	0	
BERRIEN	1	R	0	0	0	0	0	0	1	0	
CASS	11	1	0	0	0	9	0	0	1	0	
GRATIOT	12	9	0	0	0	R	0	0	3	0	
IONIA	13	11	0	0	0	0	0	0	2	0	
KENT	1	0	0	0	0	R	0	0	1	0	
MONTCALM	59	47	0	0	0	4	0	0	8	0	
MUSKEGON	127	38	0	0	0	34	0	0	55	0	
OTTAWA	1	R	0	0	0	1	0	0	0	0	
SAGINAW	7	3	0	0	0	0	0	0	4	0	
ST.JOSEPH	1	1	0	0	0	0	0	0	R	0	
VAN BUREN	1	1	0	0	0	0	0	0	R	0	
TOTAL	581	117	0	0	0	51	0	0	86	0	327
STATE TOTAL	14002	5292	604	361	498	2282	384	31	3087	36	1427

(CONTINUED ON NEXT PAGE)

1/ INCLUDES ONLY THOSE COUNTIES THAT SUPPLIED PULPWOOD IN 1972.
2/ COUNTY FIGURES ARE NOT AVAILABLE.
R=LESS THAN 50 CORDS.

UNIT AND COUNTY 1/	ALL SPECIES	ASPEN	BALSAM	BIRCH	HEM-LOCK	PINE	SPRUCE	TAM-ARACK	MISC. HDWDS.	CEDAR	RESIDUES 2/
NORTHEASTERN											
CARLTON	372	304	8	41	0	4	12	3	0	0	
COOK	368	45	8	0	0	41	274	0	R	0	
LAKE	709	247	4	21	0	251	186	0	0	0	
PINE	273	262	0	2	0	9	0	0	0	0	
ST.LOUIS	3046	1552	71	82	0	899	286	39	117	0	
TOTAL	4915	2410	91	146	0	1204	758	42	117	0	147
CENTRAL PINE											
AITKIN	361	267	16	25	0	6	20	27	0	0	
BECKER	6	2	2	0	0	1	1	0	0	0	
BELTRAMI	1081	605	74	104	0	163	87	44	4	0	
CASS	646	450	12	33	0	122	11	18	0	0	
CLEARWATER	400	318	2	8	0	21	20	31	0	0	
CROW WING	124	35	0	4	0	85	0	R	0	0	
HUBBARD	265	163	2	2	0	84	2	12	0	0	
ITASCA	1385	752	152	86	0	130	208	53	4	0	
WADENA	60	8	0	2	0	50	0	0	0	0	
TOTAL	4655	2600	260	264	0	662	349	185	8	0	327
RAINY RIVER											
KOOCHICHING	2946	1584	302	12	0	161	638	74	175	0	
LAKE OF THE WOODS	222	18	1	0	0	32	164	6	1	0	
TOTAL	3253	1602	303	12	0	193	802	80	176	0	85
SOUTHEASTERN											
KANABEC	25	25	0	0	0	0	0	0	0	0	
MILLE LACS	196	196	0	0	0	0	0	0	0	0	
MORRISON	37	31	0	2	0	4	0	0	0	0	
SCOTT	1	1	0	0	0	0	0	0	0	0	
TODD	2	0	0	0	0	2	0	0	0	0	
TOTAL	582	253	0	2	0	6	0	0	0	0	321
WESTERN PRAIRIE											
MAHNOMEN	5	5	0	0	0	0	0	R	0	0	
POLK	6	0	0	0	0	0	1	5	0	0	
ROSEAU	123	20	0	0	0	94	9	R	0	0	
TOTAL	134	25	0	0	0	94	10	5	0	0	0
STATE TOTAL	13539	6890	654	424	0	2159	1919	312	301	0	880

(CONTINUED ON NEXT PAGE)

1/ INCLUDES ONLY THOSE COUNTIES THAT SUPPLIED PULPWOOD IN 1972.
2/ COUNTY FIGURES ARE NOT AVAILABLE.
R=LESS THAN 50 CORDS.

UNIT AND COUNTY 1/	ALL SPECIES	ASPEN	BALSAM	BIRCH	HEM-LOCK	PINE	SPRUCE	TAM-ARACK	MISC. HDWDS.	CEDAR	RESIDUES 2/
NORTHEASTERN											
FLORENCE	423	313	8	4	19	8	4	1	66	0	
FOREST	762	398	70	6	64	24	15	R	185	0	
LANGLADE	711	473	10	14	3	4	1	5	201	0	
LINCOLN	796	484	21	23	21	49	7	1	190	0	
MARINETTE	947	593	48	5	6	135	21	1	138	0	
OCONTO	313	227	5	1	6	34	1	0	39	0	
ONEIDA	1210	587	68	83	24	154	27	8	259	0	
SHAWANO 3/	303	139	2	R	105	12	1	R	44	0	
VILAS	659	270	24	67	14	113	13	2	156	0	
TOTAL	6551	3484	256	203	262	533	90	18	1278	0	427
NORTHWESTERN											
ASHLAND	624	295	80	33	25	42	12	2	135	0	
BARRON	11	R	0	1	0	0	0	0	10	0	
BAYFIELD	746	428	22	41	10	201	1	0	43	0	
BURNETT	300	100	0	2	0	198	0	0	0	0	
DOUGLAS	849	550	1	4	3	268	4	1	18	0	
IRON	823	695	19	22	20	10	6	R	51	0	
POLK	29	R	0	0	0	29	0	0	R	0	
PRICE	950	580	55	67	19	47	8	1	173	0	
RUSK	100	36	R	7	1	R	0	0	56	0	
SAWYER	389	115	41	59	15	32	4	1	122	0	
TAYLOR	520	232	10	17	34	11	2	R	214	0	
WASHBURN	270	82	1	4	0	157	1	2	23	0	
TOTAL	5795	3113	229	257	127	995	38	7	845	0	184
CENTRAL											
ADAMS	317	3	0	0	0	184	0	0	130	0	
CHIPPEWA	51	21	R	1	6	1	0	R	22	0	
CLARK	199	34	1	R	1	51	0	0	112	0	
EAU CLAIRE	31	3	0	0	0	28	0	0	0	0	
JACKSON	212	1	0	0	0	197	0	0	14	0	
JUNEAU	266	2	0	R	0	144	0	0	120	0	
MARATHON	451	121	2	1	15	12	1	R	299	0	
MARQUETTE	91	0	0	0	0	11	0	0	80	0	
MONROE	57	1	0	0	0	51	0	0	5	0	
PORTAGE	170	18	R	0	1	66	R	R	85	0	
WAUPACA	45	15	1	0	1	1	R	1	26	0	
WAUSHARA	63	R	0	0	R	35	0	0	28	0	
WOOD	318	13	R	R	1	114	0	R	190	0	
TOTAL	2471	232	4	2	25	895	1	1	1111	0	200
SOUTHWESTERN											
BUFFALO	0	0	0	0	0	R	0	0	0	0	
DUNN	7	0	0	0	0	7	0	0	0	0	
GRANT	67	13	0	7	0	R	0	0	47	0	
LACROSSE	2	0	0	0	0	2	0	0	0	0	
PEPIN	7	0	0	0	0	7	0	0	0	0	
RICHLAND	1	0	0	0	0	1	0	0	0	0	
SAUK	0	0	0	0	0	R	0	0	0	0	
TREMPEALEAU	7	0	0	0	0	7	0	0	0	0	
TOTAL	357	13	0	7	0	24	0	0	47	0	266
SOUTHEASTERN											
BROWN	9	2	R	0	R	1	0	0	6	0	
COLUMBIA	56	0	0	0	0	13	0	0	43	0	
FOND DU LAC	0	R	0	0	0	0	0	0	0	0	
GREEN LAKE	0	0	0	0	0	R	0	0	0	0	
OUTAGAMIE	1	0	0	0	0	0	0	0	1	0	
WASHINGTON	0	0	0	0	0	0	0	0	R	0	
TOTAL	200	2	0	0	0	14	0	0	50	0	134
STATE TOTAL	15374	6844	489	469	414	2461	129	26	3331	0	1211

1/ INCLUDES ONLY THOSE COUNTIES THAT SUPPLIED PULPWOOD IN 1972.
2/ COUNTY FIGURES ARE NOT AVAILABLE.
3/ INCLUDES MENOMINEE COUNTY.
R=LESS THAN 50 CORDS.

☆U.S. Government Printing Office: 1973 — 762-273

Blyth, James E.
1973. Pulpwood production in the North Central Region, by county, 1972. North Cent. For. Exp. Stn., St. Paul, Minn. 16 p., illus. (USDA For. Serv. Resour. Bull. NC-18)

Presents 1972 pulpwood production and receipt data for the Lake States and Central States. Pulpwood production for the Lake States is given by species for each county, and production by Forest Survey Unit is compared to that of previous years. For the Central States, 1972 pulpwood production and receipt data are presented by State, and four production classes are shown by county.

OXFORD: 861.0(77):721:792. KEY WORDS: roundwood, residue, receipts, Lake States, Central States.

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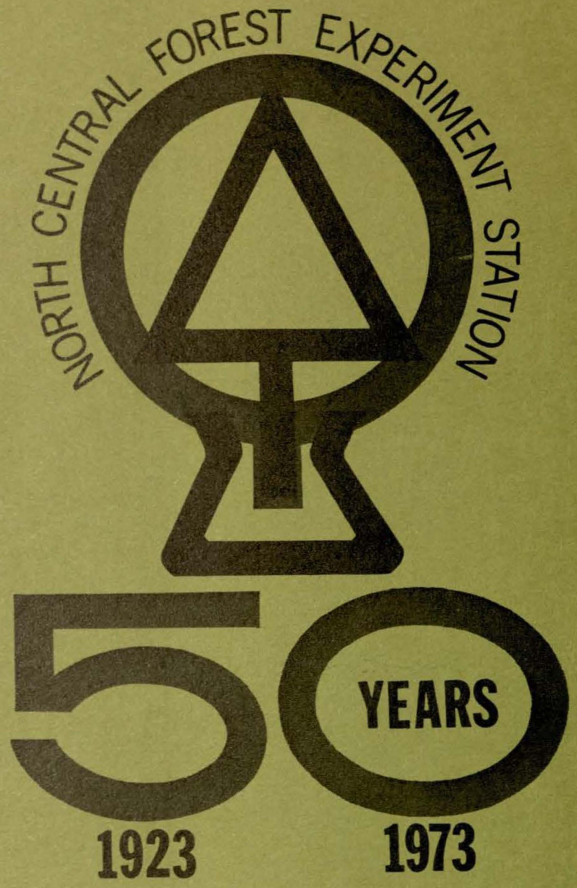
NORTH CENTRAL FOREST EXPERIMENT STATION
50
YEARS
1923
1973